
County of Loudoun
Department of Planning

MEMORANDUM

DATE: February 11, 2011

TO: Loudoun County Planning Commission

FROM: Jane McCarter, Project Manager Land Use Review

**SUBJECT: February 16, 2011 Planning Commission Worksession
SPEX 2010-0013 Luck Stone Inter-Quarry Tunnel – Revised Conditions**

BACKGROUND:

The Planning Commission met in worksession February 2, 2011 and discussed the proposed Conditions of Approval. Staff recommends the proposed plat and conditions for the inter-quarry tunnel, SPEX 2010-0013, incorporate the existing plat areas approved with SPEX 1990-0019 and SPEX 1999-0006 as well as the remaining applicable Conditions of Approval for each of these previously approved special exceptions. The purpose for incorporating these three plats and three sets of conditions into one plat and one set of conditions is to include the bridge/conveyor land area and to facilitate a clear understanding of the interaction of the proposed inter-quarry tunnel and the previously approved bridge/conveyor uses. In addition administering one set of conditions for the oddly shaped overlapping land areas would ensure a clear application to any portion of the combined land area.

ISSUE STATUS:

The Applicant has worked with Staff to address concerns regarding the Conditions of Approval. The Combined Conditions of Approval as sought by Staff and shown in *Attachment 3* includes the Special Exception uses of quarry, bridge/conveyor, and tunnel in one Conditions of Approval and one plat. The Applicant prefers to keep the inter-quarry tunnel plat and Conditions of Approval as shown in *Attachment 2* separate from those approved with the quarry SPEX 1990-0019 and the bridge/conveyor SPEX 1999-0006.

SUGGESTED MOTIONS:

1. I move that the Planning Commission forward SPEX 2010-0013, Luck Stone Inter-Quarry Tunnel, to the Board of Supervisors with a recommendation of approval subject to the Combined Conditions of Approval dated February 16, 2011 and based on the Findings attached.

OR,

2. I move that the Planning Commission forward SPEX 2010-0013, Luck Stone Inter-Quarry Tunnel, to the Board of Supervisors with a recommendation of approval subject

to the Conditions of Approval dated February 16, 2011 and based on the Findings attached.

OR,

3. I move an alternate motion.

ATTACHMENTS:

1. Findings for Approval.
2. Conditions of Approval for SPEX 2010-0013 dated February 16, 2011.
3. Combined Conditions of Approval for SPEX 2010-0013; SPEX 1990-0019 and SPEX 1999-0006 dated February 16, 2011.

FINDINGS FOR APPROVAL

1. The proposed special exception to revise the Conditions of Approval (Conditions 14-19) and the plat approved under SPEX 1990-0019 to allow for a tunnel and removing the previously approved conveyor/bridge is consistent with the land use and mineral extraction policies of the Revised General Plan (RGP).
2. The proposed tunnel provides a more environmentally sensitive and less visually intrusive alternative to the previously approved conveyor/bridge over Goose Creek and is consistent with the green infrastructure policies of the Revised General Plan (RGP).
3. The proposed special exception to revise the Conditions of Approval and the plat approved under SPEX 1990-0019, and to provide for an inter-quarry tunnel connection, complies with the Revised 1993 Zoning Ordinance.

ATTACHMENT 1

DRAFT CONDITIONS OF APPROVAL

FEBRUARY 16, 2011

SPEX 2010-0013

NOTE: The purpose of this Special Exception Application is to amend a bridge crossing of the Goose Creek as approved in SPEX 1990-0019 and instead permit an inter-quarry tunnel beneath Goose Creek as shown in this SPEX 2010-0013 to serve the planned quarry extension on the west side of the Goose Creek as shown on the proposed Special Exception Plat. The Applicant will either construct the bridge approved in SPEX 1990-0019 or the inter-quarry tunnel as proposed herein, but not both.

1. Substantial Conformance: The approved Special Exception Use, modification of the existing SPEX 1990-0019 quarry use to permit a tunnel for inter-quarry access instead of a bridge, shall be developed in substantial conformance with the Special Exception Plat, consisting of two (2) sheets dated May 5, 2010, as revised through October 20, 2010, and prepared by Dewberry & Davis LLC. (the "SPEX Plat"), subject to these Conditions of Approval. Approval of this application for the portions of Tax Maps # /61/////////6/; /61/////////8/; and /61/////////23/ (PINS # 151-37-7403, 151-16-0598, and 152-39-5797, respectively) lying within the SPEX LIMITS as delineated and labeled on the SPEX Plat (the "Property") shall not relieve the Applicant or the owners of the Property from the obligation to comply with and conform to any Revised 1993 Loudoun County Zoning Ordinance ("Zoning Ordinance"), Codified Ordinance, or other applicable requirement. As used in these conditions, "Applicant" includes the owner of the Property subject to this Special Exception approval, its successors, and parties developing, establishing or operating the approved Special Exception Use. Substantial conformance shall permit minor modifications to the quarry and related uses reasonably necessitated by good engineering practices and environmental conditions.
2. Coordinating Applications: Approval of SPEX 2010-0013 and imposition of these development conditions shall neither invalidate the approvals granted in SPEX 1990-0019 and SPEX 1999-0006 nor replace the development conditions imposed in SPEX 1990-0019 and SPEX 1999-0006, both of which shall remain valid after the County approval of SPEX 2010-0013. All other development conditions imposed in SPEX 1990-0019, inclusive of the SPEX 1990-0019 plat, shall remain in full force and effect with the sole exception of the bridge being replaced by the inter-quarry tunnel and the realigned private access road.
3. Period of Validity: Pursuant to and in accordance with the provisions of Section 6-1313 of the Zoning Ordinance, a sixty (60) year period of validity is specifically approved for this Special Exception permit. Such period of validity may be extended for good cause shown, provided that an application is submitted to the Board of Supervisors a minimum of thirty (30) calendar days before the expiration date.

ATTACHMENT 2

4. Lighting: All exterior lighting, including security lighting, shall be designed and installed to minimize light trespass and the visibility of lighting from properties offsite of the Property. Exterior light fixtures shall be full cutoff and fully shielded and shall direct light downwards and into the interior of the Property and away from surrounding public roads and properties.
5. Blasting: No bulk blasting materials shall be stored on the subject Property. Tunnel blasting operations will be limited to Mondays through Fridays between the hours of 8:00 a.m. and 5:00 p.m., except in the case when a blasting charge has been set before 5:00 p.m. and is then delayed. In such a case, the Applicant may then complete the blast after 5:00 p.m., but no later than 30 minutes after sunset.
6. Fugitive Dust: Fugitive dust shall be suppressed by use of water spraying activities. No oil-based products shall be used for suppression of fugitive dust.
7. Future Amenity: Following cessation of quarrying activities on the Property the Applicant shall coordinate with Loudoun Water and the County to create a public amenity for the Property.
8. Tunnel or Bridge/Conveyor Option: The Applicant shall construct either the tunnel (labeled as "Proposed Inter-quarry Tunnel" on Sheet 2 of the SPEX plat) or the approved bridge/conveyor (labeled as "Approved Bridge per SPEX 1990-0019" on Sheet 2 of the SPEX plat) but not both. The Applicant shall diligently pursue construction of the proposed inter-quarry tunnel. If the County determines tunnel construction cannot be completed due to unforeseen construction constraints or circumstances, then the Applicant may pursue the bridge/conveyor option. At such time as the inter-quarry tunnel is fully stabilized and open for use, the Applicant's right to construct the bridge/conveyor and Conditions 15 through 19 approved pursuant to SPEX 1990-0019 will become null and void and the applicant's right to construct said bridge, as illustrated on the approved Special Exception Development Plan dated April 4, 1990, and prepared by Dewberry & Davis, shall terminate. At no time during pursuit of any requisite approvals for the inter-quarry tunnel shall the Applicant concurrently pursue construction of the bridge/conveyor approved in SPEX 1990-0019. All other development conditions imposed in SPEX 1990-0019, inclusive of the SPEX 1990-0019 plat, shall remain in full force and effect with the sole exception of the bridge being replaced by the inter-quarry tunnel and the realigned private access road.
9. Buffer Preservation: No land disturbing activities associated with the proposed inter-quarry tunnel, approach roads, or temporary construction access shall be permitted within the minimum 300-foot "Buffer to Goose Creek", the "Scenic Creek Valley Buffer", or the "50' RSCOD Buffer" as shown on the SPEX plat. Further all disturbance activities will avoid designated wetland and steep slope areas.

ATTACHMENT 2

10. Trail Easement Along Goose Creek: At such time that an off-site trail is constructed to connect to the northern or southern boundary of the tunnel area, the Applicant shall dedicate to the County, at no cost to the County, a fourteen (14) foot wide public access easement within the "300' NO-BUILD BUFFER" as labeled and delineated on the SPEX Plat. Such easement shall be field located by County Staff in coordination with the Applicant. This provision shall not be in conflict or derogation with any existing conservation easement encumbering the subject Property.
11. Temporary Construction Access: The Applicant shall utilize an existing farm lane and bridge (labeled as "Approximate Location of Temporary Construction Access" on Sheet 2 of the plat), located on PIN #151-16- 0598, to access and locate necessary construction vehicles for the properties west of Goose Creek and begin the tunnel excavation process. No transportation of quarried rock will occur through or upon the farm lane or bridge. Field alterations to the location of the farm lane may change within the area of Special Exception to avoid existing environmental features such as existing trees, swales, and floodplain areas. The temporary construction access farm lane access point onto Cochran Mill Road will meet VDOT and FSM requirements for a construction entrance. Construction access from Cochran Mill Road to the tunnel will comply with FSM standards regarding temporary access. A cross-section of the temporary access road shall be delineated as part of the grading permit associated with the tunnel under Goose Creek. The farm lane bridge over Sycolin Creek shall be removed by the Applicant upon completion of the proposed private road crossing over Sycolin Creek as set forth in the Conditions of Approval for SPEX 2009-0027. The existing low-water farm lane bridge may remain in use solely for agricultural purposes following the opening of the proposed permanent Cochran Mill/Gant Lane connector private access easement and bridge and shall be removed immediately upon cessation of agricultural activities.
12. Traffic Management: Prior to site plan approval or issuance of a grading permit, whichever is first in time, for the tunnel construction, the Applicant shall submit a Traffic Management Plan to OTS and VDOT for review and approval. Such plan shall address the temporary construction entrance and access route, delivery schedules for wide loads during off-peak times, and measures for minimizing conflicts on the access route to and from the site. Construction traffic access to and from the Property shall be limited to Cochran Mill Road.
13. Quarried Rock Transport: Any rock or material excavated on PIN #151-37-7403 during the construction of the tunnel will be stored on the same parcel until such time as the tunnel is completed. Following opening of the tunnel, any rock recovered west of Goose Creek will be transported through the tunnel to the main plant located in Quarry B. Quarried rock shall not be transported via Cochran Mill Road.

ATTACHMENT 2

14. Tunnel Purpose: The Applicant shall utilize the proposed tunnel for conveying rock and transporting equipment vehicles which are necessary to maintain, manage, and service the proposed quarries. Access to the Luck Stone properties for all quarry trucks will continue to be provided solely via Belmont Ridge Road (Route 659).
15. Tunnel Entrances: The two proposed tunnel entrances will be located between 300 and 400 feet on both sides of the Goose Creek (outside of the 300 foot no build buffer) and only within areas previously approved for mineral extraction activities.
16. Tunnel Groundwater: The Applicant shall continuously monitor groundwater seepage within the tunnel by measuring water channeled towards trenches at either side of the tunnel excavation. Such groundwater will be collected and measured at both sides of the tunnel excavation. At regular intervals, sump pumps will be installed to transport the water to a discharge pipe equipped with a flow meter to measure water infiltration.
17. Risk Planning: The Applicant shall implement the technical memorandum "Risk Mitigation Measures and Contingency Planning for Tunneling Under Goose Creek" dated January 14, 2011, and prepared by Juergen Laubbichler, Dr. G. Sauer Corporation. The Applicant shall indemnify and hold harmless the Commonwealth of Virginia, its elected or appointed officials, and all boards, departments, officers, agents, employees, and volunteers from all responsibility, liability, claims, damages, judgment, expenses, attorneys fees and compensation whether in contract or tort arising out of personal injury, including death, or property damage sustained or alleged to have been sustained in whole or in part by any or all persons whatsoever as a result of or arising out of the Applicant's or any Applicant's agent's negligence associated with the construction, operation, or maintenance of the inter-quarry tunnel (the "Claims"). Prior to the issuance of any permit related to the tunnel, and for the duration of the use of the tunnel for quarrying activities, the Applicant shall carry a comprehensive general liability insurance policy for no less than Ten Million Dollars (\$10,000,000) that covers the Claims. A copy of the policy shall be provided to the County, through its zoning administrator, prior to the issuance of any permit related to, and prior to the commencement of, tunnel construction. The Applicant shall provide written evidence of the continued maintenance of the said policy of insurance in force to the zoning administrator upon request. The policy must be written on an occurrence basis and must be issued by a company or companies licensed and admitted, or authorized to do business, in the Commonwealth of Virginia, having a financial strength rating of at least "A-" (Excellent) and a financial size category of "Class X" or better in the latest evaluation by A.M. Best Co. The policy must: (1) name the Loudoun County Board of Supervisors as additional insured and third party beneficiary, (2) allow severability of interests and rights of cross-claim, and (3) provide that the policy shall not be canceled, not renewed, or its coverage reduced, without at least thirty (30) days' prior written notice to the County's zoning administrator. The said insurance shall not contain any exclusions or endorsements relating to an additional insured's negligence, or relating to any other activities by an additional insured, and shall not have a deductible or

ATTACHMENT 2

retention in excess of One Hundred Thousand Dollars (\$100,000). The said insurance coverage shall be primary, and any other insurance, self-insurance, coverage, or indemnity available to the Board, the County or their elected or appointed officials, and all boards, departments, officers, agents, employees, and volunteers shall be in excess of and non-contributory with insurance, self-insurance, coverage or indemnity provided to the Board, the County or their elected or appointed officials, and all boards, departments, agents, employees, and volunteers. In no event shall the Applicant's indemnification obligation be limited by the amount of such insurance coverage.

18. Maintenance of Goose Creek Flow: In the event of a tunnel collapse, rock fracture or other geological fault proximately caused by actions of the Applicant or its agents, employees, contractors or assigns, resulting in a material reduction in the water flow levels of Goose Creek, and unacceptable levels of water ingress into the tunnel as determined by the Applicant, the Applicant shall, in consultation with the appropriate County and state officials, immediately implement all necessary and appropriate measures, set forth in "Document 242C—Safety Measures for Tunneling Under Goose Creek," dated January 14, 2011, and shall restore the Goose Creek. In the event that the above mentioned tunnel collapse or rock fracture occurs, the Applicant shall also install, operate, and maintain two stream flow gauges in Goose Creek; one upstream and one downstream of the tunnel area. The devices and location shall be approved by the County and shall be operational until such time that the flow values from the two gauges are generally equalized and demonstrate that the tunnel failure has been repaired such that the tunnel will have no detrimental impact on the flow of Goose Creek.
19. Wood Turtles: Prior to approval of the site plan or issuance of a grading permit, whichever is first in time, for the tunnel or associated quarry uses, the Applicant shall notify all contractors working on the Subject Property about the potential to encounter wood turtles and to undertake a sweep of potential habitat areas prior to initiation of construction. The Applicant will also distribute a flyer prepared by the Virginia Department of Game and Inland Fisheries that includes photos and a description of wood turtles that is distributed to all site workers. Any wood turtles located during such a sweep will be relocated to a suitable area along Sycolin Creek or Goose Creek. Additionally, The Applicant will comply with all federal, state, and local laws governing endangered species. Upon determination by the appropriate federal or state authority that rare species/communities exist, the Applicant will evaluate the portion of the site not impacted by mining as a possible mitigation area prior to disturbance. The Applicant shall instruct contractors to use bridge/conveyor spans or bottomless culverts to prevent barriers of migration.
20. Federal and State Permits: If violations of any state or federal permits issued to the Applicant concerning construction of the tunnel that the Applicant is unable to resolve are reported to Loudoun County by the applicable regulatory agency, the Board of Supervisors, and/or the County Administrator, may request the Applicant to provide, at

ATTACHMENT 2

the Applicant's sole expense, the services of an appropriate firm to review the nature of the violation, if any, and the remedy, if any. This firm shall be jointly selected by the Applicant and Loudoun County and will report solely to Loudoun County.

21. Inspections: The County reserves the right, in full compliance with the Virginia Department of Mines, Minerals and Energy and Mine Safety and Health Administration requirements, to inspect the site at any reasonable time during normal hours of operation without prior notice to insure that the construction and operation of the tunnel meets the requirements of the Revised 1993 Zoning Ordinance, these conditions, the Codified Ordinances or other regulatory requirement.

ATTACHMENT 2

DRAFT COMBINED CONDITIONS OF APPROVAL

FEBRUARY 16, 2011

Combined Conditions of Approval SPEX 2010-0013; SPEX 1999-0006 and SPEX 1990-0009

NOTE: The purpose of this Special Exception Application is to amend a bridge crossing of the Goose Creek as approved in SPEX 1990-0019 and instead permit an inter-quarry tunnel beneath Goose Creek as shown in this SPEX 2010-0013 to serve the planned quarry extension on the west side of the Goose Creek as shown on the proposed Special Exception Plat. The Applicant will either construct the bridge approved in SPEX 1990-0019 or the inter-quarry tunnel as proposed herein, but not both.

Conditions 1-21 apply to any and all of the three special exception uses of the Quarry Use, Inter-Quarry Tunnel Use, Bridge/ Conveyor Use.

1. **Substantial Conformance:** The approved Special Exception Use, modification of the existing SPEX 1990-0019 quarry use to permit a tunnel for inter-quarry access instead of a bridge, shall be developed in substantial conformance with the Special Exception Plat, consisting of two (2) sheets dated May 5, 2010, as revised through October 20, 2010, and prepared by Dewberry & Davis LLC. (the "SPEX Plat"), subject to these Conditions of Approval. Approval of this application for the portions of Tax Maps # /61/////////6/; /61/////////8/; and /61/////////23/ (PINS # 151-37-7403, 151-16-0598, and 152-39-5797, respectively) lying within the SPEX LIMITS as delineated and labeled on the SPEX Plat (the "Property") shall not relieve the Applicant or the owners of the Property from the obligation to comply with and conform to any Revised 1993 Loudoun County Zoning Ordinance ("Zoning Ordinance"), Codified Ordinance, or other applicable requirement. As used in these conditions, "Applicant" includes the owner of the Property subject to this Special Exception approval, its successors, and parties developing, establishing or operating the approved Special Exception Use. Substantial conformance shall permit minor modifications to the quarry and related uses reasonably necessitated by good engineering practices and environmental conditions.
2. **Coordinating Applications:** Approval of Combined SPEX 2010-0013, SPEX 1999-0006 and SPEX 1990-0019 and imposition of these development conditions shall replace the development conditions imposed in SPEX 1990-0019 and SPEX 1999-0006.
3. **Period of Validity:** Pursuant to and in accordance with the provisions of Section 6-1313 of the Zoning Ordinance, a sixty (60) year period of validity is specifically approved for this Special Exception permit. Such period of validity may be extended for good cause shown, provided that an application is submitted to the Board of Supervisors a minimum of thirty (30) calendar days before the expiration date.

ATTACHMENT 3

4. Lighting: All exterior lighting, including security lighting, shall be designed and installed to minimize light trespass and the visibility of lighting from properties offsite of the Property. Exterior light fixtures shall be full cutoff and fully shielded and shall direct light downwards and into the interior of the Property and away from surrounding public roads and properties.
5. Blasting: No bulk blasting materials shall be stored on the subject Property. Tunnel blasting operations will be limited to Mondays through Fridays between the hours of 8:00 a.m. and 5:00 p.m., except in the case when a blasting charge has been set before 5:00 p.m. and is then delayed. In such a case, the Applicant may then complete the blast after 5:00 p.m., but no later than 30 minutes after sunset.
6. Fugitive Dust: Fugitive dust shall be suppressed by use of water spraying activities. No oil-based products shall be used for suppression of fugitive dust.
7. Future Amenity: Following cessation of quarrying activities on the Property the Applicant shall coordinate with Loudoun Water and the County to create a public amenity for the Property.
8. Tunnel or Bridge/Conveyor Option: The Applicant shall construct either the tunnel (labeled as "Proposed Inter-quarry Tunnel" on Sheet 2 of the SPEX plat) or the approved bridge/conveyor (labeled as "Approved Bridge per SPEX 1990-0019" on Sheet 2 of the SPEX plat) but not both. The Applicant shall diligently pursue construction of the proposed inter-quarry tunnel. If the County determines tunnel construction cannot be completed due to unforeseen construction constraints or circumstances, then the Applicant may pursue the bridge/conveyor option. At such time as the inter-quarry tunnel is fully stabilized and open for use, the Applicant's right to construct the bridge/conveyor and Conditions 15 through 19 approved pursuant to SPEX 1990-0019, and Conditions 22 through 26 approved pursuant to SPEX 2010-0013 will become null and void and the applicant's right to construct said bridge, as illustrated on the approved Special Exception Development Plan dated April 4, 1990, and prepared by Dewberry & Davis, shall terminate. At no time during pursuit of any requisite approvals for the inter-quarry tunnel shall the Applicant concurrently pursue construction of the bridge/conveyor approved in SPEX 1990-0019.
9. Buffer Preservation: No land disturbing activities associated with the proposed inter-quarry tunnel, approach roads, or temporary construction access shall be permitted within the minimum 300-foot "Buffer to Goose Creek", the "Scenic Creek Valley Buffer", or the "50' RSCOD Buffer" as shown on the SPEX plat. Further all disturbance activities will avoid designated wetland and steep slope areas.
10. Trail Easement Along Goose Creek: At such time that an off-site trail is constructed to connect to the northern or southern boundary of the tunnel area, the Applicant shall dedicate to the County, at no cost to the County, a fourteen (14) foot wide public access

ATTACHMENT 3

easement within the “300’ NO-BUILD BUFFER” as labeled and delineated on the SPEX Plat. Such easement shall be field located by County Staff in coordination with the Applicant. This provision shall not be in conflict or derogation with any existing conservation easement encumbering the subject Property.

11. Temporary Construction Access: The Applicant shall utilize an existing farm lane and bridge (labeled as “Approximate Location of Temporary Construction Access” on Sheet 2 of the plat), located on PIN #151-16- 0598, to access and locate necessary construction vehicles for the properties west of Goose Creek and begin the tunnel excavation process. No transportation of quarried rock will occur through or upon the farm lane or bridge. Field alterations to the location of the farm lane may change within the area of Special Exception to avoid existing environmental features such as existing trees, swales, and floodplain areas. The temporary construction access farm lane access point onto Cochran Mill Road will meet VDOT and FSM requirements for a construction entrance. Construction access from Cochran Mill Road to the tunnel will comply with FSM standards regarding temporary access. A cross-section of the temporary access road shall be delineated as part of the grading permit associated with the tunnel under Goose Creek. The farm lane bridge over Sycolin Creek shall be removed by the Applicant upon completion of the proposed private road crossing over Sycolin Creek as set forth in the Conditions of Approval for SPEX 2009-0027. The existing low-water farm lane bridge may remain in use solely for agricultural purposes following the opening of the proposed permanent Cochran Mill/Gant Lane connector private access easement and bridge and shall be removed immediately upon cessation of agricultural activities.
12. Traffic Management: Prior to site plan approval or issuance of a grading permit, whichever is first in time, for the tunnel construction, the Applicant shall submit a Traffic Management Plan to OTS and VDOT for review and approval. Such plan shall address the temporary construction entrance and access route, delivery schedules for wide loads during off-peak times, and measures for minimizing conflicts on the access route to and from the site. Construction traffic access to and from the Property shall be limited to Cochran Mill Road.
13. Quarried Rock Transport: Any rock or material excavated on PIN #151-37-7403 during the construction of the tunnel will be stored on the same parcel until such time as the tunnel is completed. Following opening of the tunnel, any rock recovered west of Goose Creek will be transported through the tunnel to the main plant located in Quarry B. Quarried rock shall not be transported via Cochran Mill Road.
14. Tunnel Purpose: The Applicant shall utilize the proposed tunnel for conveying rock and transporting equipment vehicles which are necessary to maintain, manage, and service the proposed quarries. Access to the Luck Stone properties for all quarry trucks will continue to be provided solely via Belmont Ridge Road (Route 659).

ATTACHMENT 3

15. Tunnel Entrances: The two proposed tunnel entrances will be located between 300 and 400 feet on both sides of the Goose Creek (outside of the 300 foot no build buffer) and only within areas previously approved for mineral extraction activities.
16. Tunnel Groundwater: The Applicant shall continuously monitor groundwater seepage within the tunnel by measuring water channeled towards trenches at either side of the tunnel excavation. Such groundwater will be collected and measured at both sides of the tunnel excavation. At regular intervals, sump pumps will be installed to transport the water to a discharge pipe equipped with a flow meter to measure water infiltration.
17. Risk Planning: The Applicant shall implement the technical memorandum "Risk Mitigation Measures and Contingency Planning for Tunneling Under Goose Creek" dated January 14, 2011, and prepared by Juergen Laubbichler, Dr. G. Sauer Corporation. The Applicant shall indemnify and hold harmless the Commonwealth of Virginia, its elected or appointed officials, and all boards, departments, officers, agents, employees, and volunteers from all responsibility, liability, claims, damages, judgment, expenses, attorneys fees and compensation whether in contract or tort arising out of personal injury, including death, or property damage sustained or alleged to have been sustained in whole or in part by any or all persons whatsoever as a result of or arising out of the Applicant's or any Applicant's agent's negligence associated with the construction, operation, or maintenance of the inter-quarry tunnel (the "Claims"). Prior to the issuance of any permit related to the tunnel, and for the duration of the use of the tunnel for quarrying activities, the Applicant shall carry a comprehensive general liability insurance policy for no less than Ten Million Dollars (\$10,000,000) that covers the Claims. A copy of the policy shall be provided to the County, through its zoning administrator, prior to the issuance of any permit related to, and prior to the commencement of, tunnel construction. The Applicant shall provide written evidence of the continued maintenance of the said policy of insurance in force to the zoning administrator upon request. The policy must be written on an occurrence basis and must be issued by a company or companies licensed and admitted, or authorized to do business, in the Commonwealth of Virginia, having a financial strength rating of at least "A-" (Excellent) and a financial size category of "Class X" or better in the latest evaluation by A.M. Best Co. The policy must: (1) name the Loudoun County Board of Supervisors as additional insured and third party beneficiary, (2) allow severability of interests and rights of cross-claim, and (3) provide that the policy shall not be canceled, not renewed, or its coverage reduced, without at least thirty (30) days' prior written notice to the County's zoning administrator. The said insurance shall not contain any exclusions or endorsements relating to an additional insured's negligence, or relating to any other activities by an additional insured, and shall not have a deductible or retention in excess of One Hundred Thousand Dollars (\$100,000). The said insurance coverage shall be primary, and any other insurance, self-insurance, coverage, or indemnity available to the Board, the County or their elected or appointed officials, and

ATTACHMENT 3

all boards, departments, officers, agents, employees, and volunteers shall be in excess of and non-contributory with insurance, self-insurance, coverage or indemnity provided to the Board, the County or their elected or appointed officials, and all boards, departments, agents, employees, and volunteers. In no event shall the Applicant's indemnification obligation be limited by the amount of such insurance coverage.

18. Maintenance of Goose Creek Flow: In the event of a tunnel collapse, rock fracture or other geological fault proximately caused by actions of the Applicant or its agents, employees, contractors or assigns, resulting in a material reduction in the water flow levels of Goose Creek, and unacceptable levels of water ingress into the tunnel as determined by the Applicant, the Applicant shall, in consultation with the appropriate County and state officials, immediately implement all necessary and appropriate measures, set forth in "Document 242C—Safety Measures for Tunneling Under Goose Creek," dated January 14, 2011, and shall restore the Goose Creek. In the event that the above mentioned tunnel collapse or rock fracture occurs, the Applicant shall also install, operate, and maintain two stream flow gauges in Goose Creek; one upstream and one downstream of the tunnel area. The devices and location shall be approved by the County and shall be operational until such time that the flow values from the two gauges are generally equalized and demonstrate that the tunnel failure has been repaired such that the tunnel will have no detrimental impact on the flow of Goose Creek.
19. Wood Turtles: Prior to approval of the site plan or issuance of a grading permit, whichever is first in time, for the tunnel or associated quarry uses, the Applicant shall notify all contractors working on the Subject Property about the potential to encounter wood turtles and to undertake a sweep of potential habitat areas prior to initiation of construction. The Applicant will also distribute a flyer prepared by the Virginia Department of Game and Inland Fisheries that includes photos and a description of wood turtles that is distributed to all site workers. Any wood turtles located during such a sweep will be relocated to a suitable area along Sycolin Creek or Goose Creek. Additionally, The Applicant will comply with all federal, state, and local laws governing endangered species. Upon determination by the appropriate federal or state authority that rare species/communities exist, the Applicant will evaluate the portion of the site not impacted by mining as a possible mitigation area prior to disturbance. The Applicant shall instruct contractors to use bridge/conveyor spans or bottomless culverts to prevent barriers of migration.
20. Federal and State Permits: If violations of any state or federal permits issued to the Applicant concerning construction of the tunnel that the Applicant is unable to resolve are reported to Loudoun County by the applicable regulatory agency, the Board of Supervisors, and/or the County Administrator, may request the Applicant to provide, at the Applicant's sole expense, the services of an appropriate firm to review the nature of the violation, if any, and the remedy, if any. This firm shall be jointly selected by the Applicant and Loudoun County and will report solely to Loudoun County.

ATTACHMENT 3

21. **Inspections:** The County reserves the right, in full compliance with the Virginia Department of Mines, Minerals and Energy and Mine Safety and Health Administration requirements, to inspect the site at any reasonable time during normal hours of operation without prior notice to insure that the construction and operation of the tunnel meets the requirements of the Revised 1993 Zoning Ordinance, these conditions, the Codified Ordinances or other regulatory requirement.

Conditions for the Bridge/ Conveyor Use solely: previously SPEX 1990-0019

22. **Sketch Plan Conformance:** The Applicant shall construct the bridge/conveyor across Goose Creek in substantial conformance with the sketch plan prepared by Dewberry & Davis. The design shall include solid or tightly jointed walls and bottom.
23. **Contained Transport Construction:** The Applicant shall design the bridge/conveyor to prevent water or debris from falling from the structure into Goose Creek.
24. **Collection Ponds:** The Applicant shall construct a collection pond or ponds to capture water from the structure. The Applicant shall include the ponds in the site plan design.
25. **Acceptable Transport Uses:** The Applicant shall ensure that the bridge/conveyor is used only to convey crushed stone across Goose Creek and by service and passenger vehicles which are necessary to maintain, manage and service the site.
26. **Bridge/Conveyor Lifespan:** The Applicant shall remove or donate to the County of Loudoun, upon request by the Loudoun County Board of Supervisors, the conveyor/bridge upon the final and permanent cessation of quarry activities or sixty years after receipt of the first zoning permit for the project.

Conditions for the Quarry Use solely: previously SPEX 1990-0019 and SPEX 1999-0006

27. **Traffic Signal:** The Applicant shall contribute \$10,000 toward the design, construction and installation of the traffic signal on Route 659 at the existing quarry entrance when warranted by VDOT. This contribution shall escalate according to the CPI-Urban Laborer inflation factor with 1990 as the base year.
28. **Route 659 Turn Lanes:** The Applicant shall construct entrance improvements at the existing quarry entrance on Route 659 to consist of right and left turn lanes with appropriate tapers. These improvements shall be designed and constructed in accordance with all VDOT and County standards. These improvements shall be constructed in coordination with the planned relocation and reconstruction of Route 659.

ATTACHMENT 3

29. **Route 653 Entrance:** The Applicant shall make or cause to be made improvements to Route 653 from the proposed employee/service entrance to the north site of the W&OD Trail to consist of an eighteen (18) foot wide, hard surface section, plus shoulder and ditch. The hard surface improvements shall consist of tar and chip material (double seal coat surface treatment application) over the existing grade and base. Further, the improvements shall be made within the existing thirty (30) foot prescriptive easement and the existing bridge/conveyor shall remain. These improvements shall be designed and constructed in accordance with all VDOT and County standards. This roadway shall not be used to remove extracted materials.
30. **Route 659 Dedication:** The Applicant shall dedicate land along the Route 659 frontage sufficient to accommodate a total 120 foot right-of-way (the existing fifty (50) foot right-of-way for Route 659 is to be a part of the total of the 120 foot right-of-way) for Route 659. However, the Applicant shall dedicate additional right-of-way to accommodate only turn lanes and drainage structures for a total right-of-way width of up to 132 feet, or greater, if agreed to by the Applicant and the County. This dedication shall occur upon the approval of VDOT and the County of the construction plans and profiles for the upgrading of Route 659.
31. **Landscaping Plan:** The Applicant shall provide a landscaping plan at submission of the site plan for the 300 foot buffer area along Goose Creek for review and approval by the Zoning Administrator. The buffer area landscaping plan which shall be agreed upon by Staff and the Applicant during the site plan review shall ensure visual screening by providing for planting to supplement the existing vegetation, except for the areas outlined in Condition #37.
32. **Fencing:** The Applicant shall construct a fence, consisting of a four (4) foot woven wire fence with two (2) strands of barbed wire for a total of five (5) feet or as otherwise agreed to by the Staff and the Applicant during site plan review, around the active operational quarry area. The location of said fence, as well as details shall be shown on any site plan applications. Fencing shall be expanded as the quarry operation expands.
33. **Berms:** The Applicant shall establish earthen berms along the northern property boundary adjacent to the W&OD Trail to be at least eight (8) feet above the established grade of the Trail. Further, the Applicant shall establish earthen berms along the eastern edge of the Sycolin Creek floodplain to a height of ten (10) feet.
34. **Berm Stabilization:** The Applicant shall ensure that all berms are seeded and landscaped to protect against erosion. The Applicant shall submit a landscaping and planting plan at the time of the site plan submission. The landscaping plan shall be acceptable to both the Staff and the Applicant and shall be agreed upon during the site plan review.

ATTACHMENT 3

35. **Perimeter Buffer:** The Applicant shall establish a 200 foot buffer area to be seeded and planted to supplement existing trees around the perimeter of the property, except along the western edge as shown on the Special Exception plat prepared by Dewberry & Davis and dated May 5, 2010 and revised to October 20, 2010 where a 100 foot buffer area shall be established along the eastern side of Sycolin Creek and along Goose Creek where a 300 foot buffer area along with reservations for berms, roadways, water lines, etc. shall be established.
36. **Stormwater Management:** The Applicant shall incorporate stormwater management methods, inclusive of Best Management Practices, in the design of the final site plan in accordance with the Virginia Stormwater Management Handbook.
37. **On-site Water and Sewer:** The Applicant shall maintain on-site water and sewer. However, should public water and sewer become available at the property line, the Applicant shall connect to these public utilities upon the Applicant needing to 1) replace the existing on-site water and sewer facilities, or 2) construct any new buildings that require water and sewer facilities. The Applicant shall, at the time of connection, properly abandon any existing on-site water and sewer facilities in accordance with Loudoun County Health Department specifications.
38. **Air Quality Monitoring:** The Applicant shall provide air quality monitoring stations in accordance with conditions established by the State Air Control Board. The data from these stations shall be provided to the County for review on a periodic basis according to a submission schedule established by the State Air Control Board.
39. **Goose Creek 300 Foot Buffer:** The Applicant shall dedicate a 300 foot buffer area along the entire property frontage with Goose Creek prior to obtaining a zoning permit for the project. This buffer area shall be dedicated as permanent open space to the Virginia Outdoor Foundation or to another entity acceptable to the County of Loudoun. This dedication will be made with certain reservations to include areas for the roadway, water lines, berms, fencing, etc. as shown on a Goose Creek Scenic Easement Exhibit drawn by Dewberry & Davis and dated August 7, 1990 and revised August 29, and with the understanding that there will be no public access to the dedicated area until the final and permanent cessation of quarrying activities.
40. **Site Plan:** The Applicant shall submit a site plan for this property.
41. **Development and Reclamation Plans:** The Applicant shall provide a development plan for the exploitation phase and reclamation plan in conformance with the Zoning Ordinance concurrent with the site plan submission for review and approval by the County.

ATTACHMENT 3

42. **Wetlands Permit:** The Applicant shall obtain a permit from the U.S. Army Corps of Engineers for disturbance of any area in wetlands or provide evidence from the U.S. Army Corps of Engineers that a permit is not required.
43. **Type II Geotechnical Report:** The Applicant shall submit a Type II Geotechnical Soils Report concurrent with the site plan. The geotechnical report shall be limited to areas where structures, buildings, roadways and parking will be located.
44. **On-site Sewage Discharge:** The Applicant shall submit a proposal for on-site sewage discharge for review and approval by the County prior to site plan submission.
45. **On-site Wells:** The Applicant shall identify on-site well locations prior to site plan submission.
46. **Monitoring Well:** The Applicant shall add one monitoring well to be located generally in the location shown on the special exception plat for the maintenance shop. This monitoring well may also serve as the domestic water source for the maintenance shop.
47. **Extraction Area Demarcation:** The Applicant shall establish a clear and permanent on-site demarcation/boundary of the entire extraction area approved by this special exception application which is to be submitted to and approved by the County prior to approval of the site plan. This demarcation/boundary shall be maintained during active quarrying.
48. **Water Level Measurements Recording:** The Applicant shall record background static water level measurements in all geotechnical borings and observation wells, on a monthly basis for a minimum period of one year prior to active quarrying. This also includes water level measurement at one surface water gauge in each Sycolin Creek and Goose Creek. These water level readings shall be reported to the County each month. The Applicant shall identify each surface water gauge on the site plan.
49. **Water Level Measurements Calculation:** The Applicant shall determine background static water levels by averaging the static water level readings taken from all geotechnical borings and monitoring wells during the one year period prior to active quarrying at this site.
50. **Quarterly Water Measurements:** During the time of active quarrying, the Applicant shall quarterly measure the groundwater levels and sample for quality, in accordance with the Virginia State Water Control Board guidelines, at each gauge and in monitoring wells number 1, 3 and 4. These measurements shall be reported to the County on a quarterly basis.

ATTACHMENT 3

51. **Existing Domestic Wells:** The Applicant shall promptly investigate any claim of damage to the three adjoining domestic wells across Sycolin Creek and will coordinate its investigation with County Staff in determining whether the Applicant's operations caused the problem. If the Applicant is responsible, the Applicant shall promptly remedy the problem by methods such as deepening the well, lowering the pump, installing a new well or installing a new pump, as may be required and most cost efficient, at its cost. If the problem resulted from ordinary wear-and-tear unrelated to the Applicant's operations, then the Applicant shall advise the County of the findings.
52. **Surface Water Samples:** The Applicant shall collect surface water samples from Goose and Sycolin Creeks above any discharge point and from the discharge outfall on a monthly basis to assure that water quality is protected. The Applicant shall ensure that the analysis of these samples is conducted in accordance with the Virginia State Water Control Board guidelines. The results shall be provided to the County each month.
53. **Permits:** The Applicant shall acquire all Federal, State, and/or County permits, as necessary. The permits obtained by the Applicant shall, among others, include a permit from the Virginia State Water Control Board. This information shall be submitted to the County upon receipt by the Applicant.
54. **Permit Revocation:** If the Applicant suffers a revocation of any State Environmental Permit Limitation, the Applicant shall be deemed to be in violation of this Special Exception.